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Report of the Nomenclature Committee for Fungi: 15

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Abstract — The IAPT Permanent Nomenclature Committee for Fungi recommends the following names for conservation: *Pseudocercospora* against *Stigmina* and *Phaeoisariopsis*, *Boletus applanatus* against *B. lipsiensis*, *Lyophyllum* with *L. semitale* as conserved type, *Roccellina* against *Roccellaria*, *Psilocybe* with *P. semilanceata* as conserved type, *Calvatia* nom. cons. against *Lanopila,* and *Phaeographis* (over *Creographa, Ectographis, Flegographa, Hymenodecton, Platygramma,* and *Pyrographa*) with *P. dendritica* as conserved type. As a result of reference under Art. 32.4, the Committee recommends that the descriptive statement accompanying publication of Ascomycota Cavalier-Smith be considered adequate for valid publication but recommends that that for Blastocladiomycota Doweld should not.

The previous report of the Nomenclature Committee for *Fungi* appeared in Taxon 57: 637–639 (2008); the current report constitutes Committee recommendations determined from votes received by the Secretary during the April 28–July 3 (2009) voting period. Those voting on Fungal Ballot 2009-1 were J.L. Crane (Urbana-Champaign IL), V. Demoulin (Liege), D.L. Hawksworth (Madrid), T. Iturriaga (Caracas), P.M. Kirk (Egham), P.-G. Liu (Kunming), T. May (Melbourne), L.L. Norvell (Portland OR), S.R. Pennycook (Auckland), C. Printzen (Frankfurt), S.A. Redhead (Ottawa), S. Ryman (Uppsala), and D. Triebel (München). One member did not return a ballot.

A 9-vote minimum is required for the 14-member committee to recommend or reject a proposal for conservation. Committee recommendations are conclusive for seven of eight formal conservation proposals. Two additional recommendations resulted from the Committee's discussion on whether the descriptive statements associated with two phylum names satisfied the minimal requirements of Art. 32(d) for a "description or diagnosis". Outcomes are reported as yes : no : more discussion+abstention. Percentages were

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determined from our membership total (14) and not from the number of actual ballots returned (13).

Proposals published in Taxon to conserve or reject

(1732) Conserve the name *Pseudocercospora* against *Stigmina* and *Phaeoisariopsis* (*Hyphomycetes*). Proposed by Braun & Crous. Taxon 55(3): 803. (2006). Votes — 10 : 2 : 1 (71.4% recommend conservation.)

This somewhat controversial proposal was prompted by early molecular data that suggested merging three genera (*Pseudocercospora, Stigmina, Phaeoisariopsis*) among which one, *Pseudocercospora,* comprises 1000 species. Conservation of *Pseudocercospora* would not rule out using *Stigmina* and *Phaeoisariopsis* for independent genera, while – as one committee member noted –"failure to conserve *Pseudocercospora* as the name for the combined genus would be nomenclaturally disastrous."

The previous 1 May 2007 ballot delivered 10 votes supporting Prop. 1732 and 5 votes for discussion. In view of the 2009 71% majority and addition of only two new comments since 2007, the Committee now recommends conserving the name *Pseudocercospora* over *Stigmina* and *Phaeoisariopsis* for the combined genus.

(1739) Conserve the name *Boletus applanatus* against *B. lipsiensis* (*Basidiomycota*). Proposed by Redhead, Ginns & Moncalvo in Taxon 55(4): 1029–1030. (2006). Votes – 12 : 0 : 1 (85.7% recommend conservation.)

A well-known ganoderma first published by Batsch (1796) as *Boletus lipsiensis* is also commonly accepted under the epithet '*applanatus,*' introduced by Persoon in 1800. The taxon in question has been subject to much misidentification and nomenclatural confusion. A recent Niemelä & Miettinen type study (2008, Taxon 57: 963-966) concludes that the designated type represents the taxon usually called *G. applanatum.* Although Chair Demoulin's detailed minority report (in Taxon 59, 2010 in press) was not available for consideration by the Committee prior to return of Ballot 2009-1, the continued strong support for the proposal makes it doubtful that members will ever vote to reject. The proposal is thus forwarded to the General Committee as recommended.

(1742) Conserve the name *Lyophyllum* with a conserved type (*Basidiomycota*). Proposed by Redhead, Hofstetter, Clémençon, Moncalvo & Vilgalys in Taxon 55(4): 1034–1036 (2006). Votes – 10 : 0 : 3 (71.4% recommend conservation).

Recent molecular analyses reveal the original type, *Lyophyllum leucophaeatum,* to be distant from other grey-brown lyophyllums and more closely related to colorful 'Calocybe'-clade taxa. One taxonomic option is to establish most of the

grey-brown pigmented *Lyophyllum* species to a new genus and importing the brightly pigmented species into *Lyophyllum*. The proposers note, "application of the name *Lyophyllum* to a taxonomic group primarily consisting of brightly pigmented species while simultaneously excluding the grey-brown taxa would be a nearly 180° reversal of the current situation where *Calocybe* are colourful and *Lyophyllum* are grey-brown, and would lead to general confusion and great resistance among mycologists." They offer as a preferred alternative naming and conserving a new type for what has come to be regarded as the 'typical' (e.g., grey-brown pigmented) *Lyophyllum* species.

The proposal continues to be viewed favorably by the majority of Committee members, with a 71.4% majority on Ballot 2009-1 now agreeing with the previous 64.7% majority (May 2007 – 11 : 1 : 6) to recommend conserving *Lyophyllum* with *L. semitale* (replacing Karsten's originally designated *L. leucophaeatum*) as type.

(1756) Conserve the name *Roccellina* against *Roccellaria* (lichenized *Ascomycota*). Proposed by Tehler in Taxon 56(1): 254–255 (2007). Votes – 11 : 0 : 2 (78.6% recommend that *Roccellina* be conserved.).

The proposer contrasts the widespread acceptance of *Roccellina,* published by Darbishire in 1898 and now represented by 27 taxa, to the monotypic and less well-known *Roccellaria,* established a year earlier by the same author. Molecular analyses showing *Roccellaria* nested within a paraphyletic *Roccellina* suggest that if the two taxa are combined into one taxon, the better-known name should have precedence.

(1757) Conserve the name *Psilocybe* (*Basidiomycota*) with a conserved type. Proposed by Redhead, Moncalvo, Vilgalys, Matheny, Guzmán-Dávalos & Guzmán in Taxon 56(1): 255–257. (2007). Votes – 13 : 0 : 0 (92.9% recommend conservation of the genus *Psilocybe* with *P. semilanceata* as type.)

Recent molecular analyses support fragmentation of the large well-known genus, *Psilocybe*, into two major clades. The name *Psilocybe* is almost universally associated with its hallucinogenic representatives, despite the fact that the currently accepted lectotype of the name is the "common moss inhabiting, non-hallucinogenic species, *P. montana*." *Psilocybe montana* is supported in the major non-hallucinogenic clade that, if generically segregated, would leave "the hallucinogenic species without a generic name." Additionally, Donk's 1962 lectotypification by *P. montana* was preceded by a Clements & Shear's 1931 lectotypification [by *P. merdaria*] and so "cannot be superseded except by conservation." Prop. 1757 proposes to conserve the name *Psilocybe* with the well-known hallucinogenic *P. semilanceata,* which itself was accepted by many authors as lectotype between 1938-1968). The name *Deconica* (typified

by *Agaricus physaloides* Bull.) is available for the non-hallucinogenic clade.

The proposers offered an alternate proposal (proposal B, not placed on the ballot) that would "leave the typification as generally, but incorrectly, accepted until now", with *P. montana* as type, after explaining that the previously proposed *P. merdaria* is atypical of the clade and noting that then a new name would be needed for the hallucinogenic clade.

All responding Committee members unanimously voted to conserve *Psilocybe* with *P. semilanceata* as type.

(1770) Conserve *Calvatia* nom. cons. (*Basidiomycota, Lycoperdaceae*) against an additional name, *Lanopila*. Proposed by Coetzee & van Wyk in Taxon 56(2): 598–599. (2007). Votes – 13 : 0 : 0 (92.9% recommend conservation.).

Calvatia is a well-known name for a cosmopolitan genus represented by >35 medium- to large-sized puffball species that dehisce through irregular fragmentation of the peridia. Typified by *Lanopila wahlbergii* (now a synonym of *Calvatia argentea*), the earlier named *Lanopila* was incorporated into *Langermannia* 44 years ago, during which time the name fell from common use. Kreisel's 1992 reincorporation of *Langermannia* into *Calvatia* leaves *Lanopila* as a nomenclatural threat to *Calvatia*.

All Committee members responding unanimously recommend conserving the name *Calvatia* against *Lanopila.*

(1792) Conserve the name *Phaeographis,* with a conserved type, against *Creographa, Ectographis, Flegographa, Hymenodecton, Platygramma,* and *Pyrographa (Ascomycota: Ostropales: Graphidaceae*). Proposed by Lücking, Kalb, Staiger & McNeill in Taxon 56(4): 1296–1299. (2007). Votes – 12 : 0 : 1 (85.7% recommends conservation of *Phaeographis.*)

Graphina, *Phaeographina*, and *Phaeographis* were twice proposed for conservation, once in 1930 and again in 1981. Conservation was not recommended due to the 'uncertain taxonomic application' of the names. The 1981 proposal was debated for 11 years, rejected due to unsettled taxonomy, reopened for further debate for 6 years and twice more rejected.

The new proposal addresses Staiger's concept of the *Graphidaceae* that finally sorts out morphologically and molecularly the taxonomic relationships among the genera. The Committee recommends conservation of *Phaeographis* with *P. dendritica* as conserved type.

Special recommendations: clarification on minimal standards for valid publication of higher level taxa

The names *Ascomycota* Caval.-Sm. (in Biol. Rev. 73: 247. 1998) and *Blastocladiomycota* T.Y. James (in Mycologia 98: 867. 2007 ['2006']) as accepted in Hibbett & al. (in Mycol. Res. 111: 509–547) have been adopted in the 10th edition of the Dictionary of Fungi. Discussion preceding publication of the Hibbett & al. paper, centered on whether the former was validly published and whether the latter had been validly published earlier by Doweld (Prosyllabus Tracheophytorum: LXXVII. 2001). General Committee Secretary Fred Barrie requested clarification under Art. 32.4 from the Nomenclature Committee for Fungi regarding whether the descriptive statements associate with these names satisfy the requirements of Art. 32.1(d).

Ascomycota Caval.-Sm.: The diagnosis of the phylum *Ascomycota* Caval.-Sm. satisfies the minimum requirements of Art. 32.1(d) for valid publication of the name. Votes – 11 : 1 : 1 (78.6% recommend acceptance of the diagnosis of *Ascomycota* Caval.-Sm. as sufficient for valid publication).

Bold (Morph. Pl.: 7, 180, 1957) first introduced the name *Ascomycota* (at the level of division – now "division or phylum") but without providing an explicit diagnosis and author citation. Although the name was used by mycologists sporadically thereafter, Cavalier-Smith (in Biological Reviews 73: 247. 1998) was the first to distinguish *Ascomycota* from *Basidiomycota* (at the division or phylum level), proposing it as a new name and providing a very short Latin diagnosis: "sporae intracellulares." A group of concerned mycologists asked the General Committee for a clarification (under 32.4) as to whether the short descriptive statement satisfies the requirements of Art. 32.1(d), and the General Committee referred the question to the Committee for Fungi for its recommendation.

Although Art. 36 [covered by Art. 32.1(e), not Art. 32.1(d)] specifies Latin requirements, the fact that the diagnosis was in Latin should be considered here as well. Under Art. 32.2, the important question regards whether the author published a statement that – in his opinion – distinguished the *Ascomycota* from the *Basidiomycota* (the only two taxa he compared). It appears obvious that Cavalier-Smith was purposely trying to validate many higher-level taxa by fulfilling the requirements of the Code.

A 78.6% Committee consensus is that the name *Ascomycota* Caval.-Sm. is validly published.

Blastocladiomycota Doweld: The description or diagnosis of the phylum *Blastocladiomycota* Doweld satisfies the minimum requirements of Art. 32(d) for valid

publication of the name. Votes – 2 : 9 : 2 (~64% do not consider that the description meets minimal standards for valid publication of the name).

In the appendix, Doweld proposed to validate the name "*Blastocladiomycota*" as the name of a phylum, by referring to the Latin diagnosis ("zoospora cilio unico instructa") under the presumably descriptive (Art. 16.1(b)) "infraphylum" name *Allomycotina* Caval.-Sm. (l.c.: 246) that cannot be treated as a validly published automatically typified name derived from *Allomyces* as the family name ('*Allomycetaceae*') had never been proposed. Doweld (in accordance with, but not citing, Art. 16.1) replaced all higher-level names not based upon legitimate family names with names based upon those with legitimate family names. Although not strictly part of the reference, the Committee took the view that *Blastocladiomycota* cannot be interpreted as a nomen novum based on *Allomycotina* but must be interpreted as a wholly new name that requires a Latin description or diagnosis to be validly published.

Hence, the Committed considered that it was the adequacy of the Latin diagnosis that was in question: Cavalier-Smith's brief Latin diagnosis for *Allomycotina* (translated as "with uniciliate zoospores;" 1998, p. 266) makes sense within the framework of his own classification (*Allomycotin*a < subphylum *Melanomycotina* < phylum *Archemycota* < subkingdom *Eomycota*) where subphyla within *Archemycota* were differentiated by features of the Golgi apparati. His framework permitted differentiation of "infraphyla" *Allomycotina* and *Zygomycotina* based on presence of uniciliate zoospores because the other uniciliate taxa in A*rchemycota* were in a different subphylum (*Dictyomycotina*), where the class *Chytridiomycetes* was placed.

On the other hand, Doweld's application of a Latin diagnosis appropriate within one classification framework to a taxon in a different classification scheme fails because the diagnosis does not serve to differentiate *Blastocladiomycota* from *Chytridiomycota* while placing the two phyla together in one subkingdom (*Mucoromycotina*) where many taxa in both phyla produce uniciliate zoospores. *Blastocladiomycota* and *Chytridiomycota* are thus not differentiated from each other. Taken out of context, the cited Latin fails to be a "statement of that which in the opinion of its author [Doweld] distinguishes the taxon from other taxa" (Art. 32.2). Because Doweld fails to distinguish the phyla in subkingdom *Mucoromycotina* from each other, "*zoospora cilio unico instructa*" does not fulfill Art. 32.1d and the Latin phrase cannot be considered a diagnosis.

A 64.3% majority of the Committee feels that because the descriptive statement is not in this context diagnostic, it does not satisfy the requirement of Art. 32(d) for a description or diagnosis by which the phylum name "*Blastocladiomycota* Doweld" is validly published.